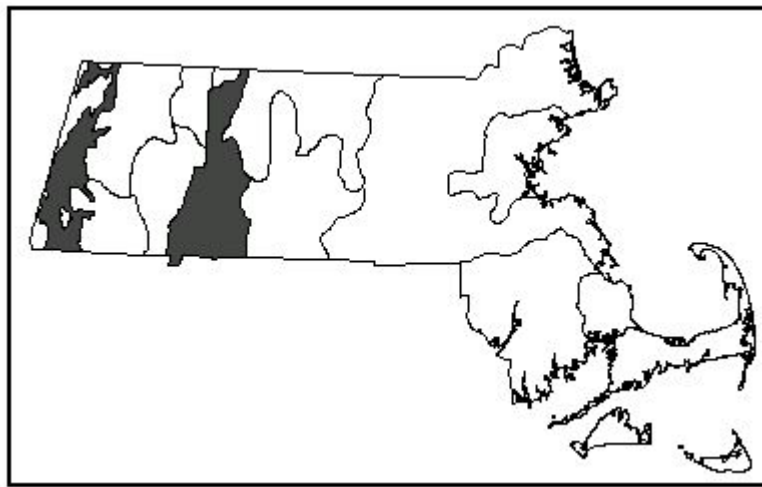


**Community Name:** CALCAREOUS BASIN FEN  
**Community ELCODE:** CP2B0A3000  
**SRANK:** S1



- Concept:** Sedge-shrub peatlands occurring in well-defined basins that have calcareous groundwater, and sometimes surface water, inputs. Calcareous basin fens are the least rich of the three types of calcareous fen communities described in Massachusetts.
- Environmental setting:** Calcareous basin fens occur in well-defined basins with deep organic sediments, permanently saturated conditions, and consolidated or floating, sedge-dominated organic mats. They are the least rich (with respect to water chemistry) of the fen communities; Based on sediment core information from Kampoosa fen this community appears relatively stable over time (existed at the site for a few thousand years) and there is no evidence of rapid infilling or terrestrialization. The *Carex lasiocarpa-Cladium mariscoides* type is less mineral rich than the *Carex aquatilis* type. More work is needed to understand the range of hydrology and water chemistry of intermediate peatlands, e.g., what physical properties differentiate calcareous basin fens from acidic graminoid fens?
- Vegetation Description:** Sedge-dominated peatlands with sparse shrub layers. The dominant species are slender woolly-fruited sedge (*Carex lasiocarpa* var. *americana*), water-sedge (*C. aquatilis*), shrubby cinquefoil (*Pentaphylloides floribunda*), and sweet-gale (*Myrica gale*), which are associated with typical bog/acidic fen species such as pitcher plant (*Sarracenia purpurea*), large cranberry (*Vaccinium macrocarpon*), round-leaved sundew (*Drosera rotundifolia*), and white beaksedge (*Rhynchospora alba*). Dominant bryophytes are *Campyllum stellatum*, *Calliergonella* spp. and *Sphagnum* spp. Calcareous basin fens differ from calcareous seepage marshes by lacking swamp-birch (*Betula pumila*), hoary willow (*Salix candida*), and typical marsh species like marsh fern (*Thelypteris palustris*) and tussock sedge (*Carex stricta*). Calcareous basin fens are similar to acidic graminoid fens in structure and species composition, but they have calciphilic species, such as shrubby cinquefoil or grass of parnassus (*Parnassia glauca*). More work is needed the classify the vegetation associations of these intermediate peatland community types.
- Associations:** Seven calcareous fen vegetation associations have been described for western New England and adjacent New York state [Motzkin, 1994]. Calcareous basin fens include two of Motzkin's associations [both grouped in his Group I]: the *Carex lasiocarpa-Cladium mariscoides* type and the *Carex aquatilis* type.
- Habitat values for Associated Fauna:** Calcareous basin fens can function as vernal pool habitat in sections that have two to three months of ponding and lack fish; these sections provide important amphibian breeding habitat.

**Associated rare plants:**

CAREX CHORDORRHIZA	CREeping SEDGE	E
SALIX PEDICELLARIS	BOG WILLOW	- WL
SCIRPUS ACUTUS	HARD-STEMMED BULL SEDGE	- WL

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**Associated rare animals:**

CLEMMYS GUTTATA	SPOTTED TURTLE	SC
CLEMMYS INSCULPTA	WOOD TURTLE	SC
WILLIAMSONIA FLETCHERI	EBONY BOGHAUNTER	E

**Examples with Public Access:** Kampoosa Bog, Stockbridge but parts are private.

**Threats:** Changes in groundwater quality and quantity; and any human activities that disturb the vegetation, substrate, or water supply. In disturbed areas, cattails may displace calcium-loving species. Beaver activity threatens calcareous fen communities by altering surface water chemistry. There is evidence to suggest that ponding of water by beaver dams may increase the water's relative acidity possibly due to the accumulation of organic acids or to dilution from acid rain [Motzkin, 1992].

**Management needs:** Fires, grazing, and /or mowing may be necessary to maintain open fen habitats. More information is needed.

**Synonyms**

**USNVC/TNC:** Myrica gale-Pentaphylloides floribunda/Carex lasiocarpa-Cladium mariscoides shrub herbaceous alliance [CEGL006068].

**MA [old name]:** SNE calcareous basin fen [CP3A1B1000].

**ME:** similar to Circumneutral fen community.

**VT:** similar to Intermediate Fen.

**NH:** Calcareous level fen.

**NY:** Rich Graminoid Fen.

**CT:** Carex lasiocarpa-Carex aquatilis community.

**RI:** Not described.

**Golet & Larson, 1974:**

**Other:** Group I [Motzkin, 1994].

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